

Ocean Sci. Discuss., referee comment RC2 https://doi.org/10.5194/os-2021-51-RC2, 2021 © Author(s) 2021. This work is distributed under the Creative Commons Attribution 4.0 License.

Comment on os-2021-51

Anonymous Referee #2

Referee comment on "Sea surface salinity short-term variability in the tropics" by Frederick M. Bingham and Susannah Brodnitz, Ocean Sci. Discuss., https://doi.org/10.5194/os-2021-51-RC2, 2021

Review of the manuscript entitled "Sea Surface Salinity Short Term Variability in the Tropics" by Bingham and Brodnitz.

In this study, authors describe the short-term variability in sea surface salinity along the tropics using data from Global tropical moored buoy array and a model output. The manuscript is mostly clear in explaining the concept and the results, and is well written and organized. I have few minor comments.

- In the abstract the authors mention that the short-term variability computed is variability of timescale 5-14 days. But this timescale is not mentioned anywhere in the manuscript.
- How did you manage the data gaps in the moored buoy data in your analysis? How continous is the data? Nothing is mentioned about this in the methods section.
- Authors use current speed to determine the timescale of short-term variability at each mooring location. Why don't you use power/wave spectrum on the buoy timeseries (or collocated model data) to understand the timescale of short-term variability?
- Authors suggest that moorings exhibit larger short-term variability during rainy periods than non-rainy periods. Does it have seasonal variations? For example in Bay of Bengal, does this conclusion holds during both monsoon season (when there is heavy precipitation) and non monsoon seasons.
- Also, no description is given on how realistic is the model in capturing the surface salinity at each mooring location. A comparison (correlation & bias) with the model and buoy timeseries is lacking.